Appendix 4: Excerpts from the 2008 Chicago Downtown Freight Study

Shipper Survey

Shippers representing a variety of freight services were identified and invited to participate in the survey. Shippers stated strong concerns about the availability of loading zones, having sufficient time in loading zones, and receiving parking citations. Several shippers suggested that a lack of available loading zones and dock facilities leads them to park illegally or block alleys. Shippers also expressed concern about limited dock access times and competition for dock space.

Truck Movements

According to truck count data, truck traffic volumes typically peak on downtown-area streets before 8:30 A.M., during the traditional morning rush hour. This creates competition for limited dock and loading zone spaces, resulting in truck congestion that impacts travel lanes. Most freight carriers prefer to leave the downtown area before 3 P.M. and there is no “typical” afternoon peak traffic period.

Research

Best Practices

The best practices of freight management services were examined in detail for six cities most similar to Chicago in size, age and population: New York, San Francisco, Seattle, London, Paris, and Barcelona. The table below lists some of the identified best practices with these and other cities in parentheses.

<table>
<thead>
<tr>
<th>DELIVERY MOVEMENT ISSUE</th>
<th>BEST PRACTICE (City)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building &amp; Infrastructure Limitations</td>
<td>Retrofit incentives to improve loading facilities (NYC)</td>
</tr>
<tr>
<td></td>
<td>Dedicated freight staff (Seattle)</td>
</tr>
<tr>
<td></td>
<td>Spot infrastructure improvement program (Seattle)</td>
</tr>
<tr>
<td></td>
<td>Freight movement obstacle inventory (Seattle)</td>
</tr>
<tr>
<td></td>
<td>Truck route map with infrastructure limitations (SF)</td>
</tr>
</tbody>
</table>
| Loading Zone Management | Muni-meters for loading zones (NYC)  
Graduated loading zone pricing scheme (NYC)  
Metered loading zones (Seattle, SF)  
CCTV enforcement of parking and loading zones (London, Barcelona)  
Multiple-use travel lanes (Barcelona)  
Increased number of loading zones (Paris) |
|--------------------------|--------------------------------------------------|
| Peak Hour Delivery       | Double parking fines in rush hours (SF)  
Recommended policy for off-hour deliveries (SF, Barcelona)  
Congestion pricing (London, Singapore)  
Peak hour access regulated by truck size (Paris)  
On-street parking area is loading zone before 10 AM (Boston) |
Traffic and Truck Congestion

- Truck route study (NYC)
- Capital improvement funds dedicated for freight-related improvements (Seattle)
- ITS to address congestion (Barcelona)
- HOT lanes (San Diego)

Multi-Modal Management

- Regional freight plans (Various)
- Form a local freight management committee (Seattle)
- Freight Villages (Various)
- Alameda Freight Corridor (LA)
- CREATE (Chicago)

Innovative Technologies

Many cities have made significant technology investments to improve freight delivery by making the most efficient use of existing infrastructure. Technology applications have been divided into two major categories:

Information exchange and infrastructure efficiency. Information exchange, such as network status updates and parking guidance, helps delivery drivers avoid congested areas or find open parking and loading facilities. Improvements in transportation infrastructure are accomplished through technologies such as signal timing optimization, curb-side management, and congestion pricing.

Recommendations

Over sixty potential recommendations were identified to improve the freight movements in the Central Area and divided into three categories: new building design standards and policies, use of the public right-of-way, and freight infrastructure recommendations. They were also divided into four groups for recommended implementation: immediate (0 - 3 years), shorter (3 - 5 years), long-term (5 - 10 years) and future (10 years or more due to high financial costs or needed improvements in technology). The following table describe the recommendations and proposed implementation schedule.
New Building Design Standards and Policies

New policies and practices for building design will improve site plan review to prevent insufficient dock facilities or dock access in design and construction.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>IMMEDIATE</th>
<th>SHORT-TERM</th>
<th>LONG-TERM</th>
<th>FUTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase dock requirements in the Zoning Code</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Refine standards that separate the dumpster area from loading docks; illustrate on site plans during review process</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add a table with the dock requirements to site plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide floor area ratio (FAR) bonus for inclusion of more than the minimum required loading dock facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan for 20-foot minimum alley widths for new developments</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require freight impact studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase dock requirements – use two dock sizes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote a designated area for bicycle messenger parking</td>
<td></td>
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<tr>
<td>Modify dock requirements to take into account secondary uses such as stores and restaurants</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage the use of public elevators for parcel deliveries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase FAR bonus for below-grade dock facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research freight elevator requirements for new buildings</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Add “Downtown Office Building” land use category to off-street loading requirement table</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
**Use of the Public Right-of-Way**

Policies, procedures or alterations to make streets, curb lanes, alleys, and loading zones more effective to support freight services and move freight shipments more efficiently.

<table>
<thead>
<tr>
<th><strong>Recommended Implementation Timeline</strong></th>
<th><strong>IMMEDIATE</strong></th>
<th><strong>SHORT-TERM</strong></th>
<th><strong>LONG-TERM</strong></th>
<th><strong>FUTURE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct enforcement program focused on noncommercial vehicles parked in dock areas</td>
<td></td>
<td></td>
<td></td>
<td>Consider Eco-Loading Zones for low emission delivery vehicles</td>
</tr>
<tr>
<td>Install new loading zone signage to clarify that their use is for commercial vehicles only</td>
<td></td>
<td></td>
<td></td>
<td>Investigate streets where center lanes can be used for deliveries</td>
</tr>
<tr>
<td>Install new truck route signage to Lower Wacker Drive</td>
<td>Designate areas with on-street parking as loading zones before 9 or 10 AM</td>
<td>Enforce parking violations via remote cameras</td>
<td></td>
<td>Initiate a pilot program of dynamic curb-lane usage via electronic signage</td>
</tr>
<tr>
<td>Initiate an alley obstruction enforcement campaign</td>
<td>Use metered freight loading zones (LZs) with graduated fees</td>
<td></td>
<td></td>
<td>Work with shippers to encourage drivers to pay parking tickets</td>
</tr>
<tr>
<td>Conduct a commercial loading zone inventory and develop a comprehensive loading zone (LZ) plan</td>
<td>Distribute promotional materials to buildings with “where to call” information</td>
<td>Increase parking violation fines for commercial vehicles</td>
<td></td>
<td>Install parking guidance systems (parking space availability signage)</td>
</tr>
<tr>
<td>Improve signal timing in the downtown</td>
<td></td>
<td></td>
<td></td>
<td>Initiate a study to investigate congestion</td>
</tr>
</tbody>
</table>
### Freight Infrastructure Recommendations

Freight infrastructure recommendations include methods and procedures to improve freight capacity at existing buildings with delivery management policies, address freight hot spots, and coordinate with CDOT to address freight issues.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>IMMEDIATE</th>
<th>SHORT-TERM</th>
<th>LONG-TERM</th>
<th>FUTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regularly update commercial loading zone information in the CDOT GIS database</td>
<td>Establish a pilot program with building managers/owners and shippers to remove dock obstacles (personal vehicles, in particular)</td>
<td>Use ITS variable message signage to allow drivers to avoid congestion before they enter the city or CBD</td>
<td>Promote the use of surface parking lots for delivery vehicle parking during AM and PM peak delivery hours</td>
<td></td>
</tr>
<tr>
<td>Establish freight point person at CDOT</td>
<td>Initiate a freight obstacle database &amp; spot hazard improvement program</td>
<td>Encourage contractors to park in parking lots (not alleys)</td>
<td>Encourage new buildings along streets with lower level access to plat lower level public ROW</td>
<td></td>
</tr>
<tr>
<td>Determine legal status of City to ticket noncommercial vehicles in loading berths</td>
<td>Initiate a ban of trucks in designated areas for limited time periods</td>
<td>Establish a retrofit incentive program</td>
<td>Encourage web based loading dock reservation system</td>
<td></td>
</tr>
<tr>
<td>Fine buildings that permit passenger vehicle parking in loading dock areas</td>
<td>Remove on-street parking on Wells / Lake / Wabash / Van Buren for loading zones</td>
<td>Perform a study of truck movements</td>
<td>Encourage multiparcel shared access to lower level parking &amp; freight facilities</td>
<td></td>
</tr>
<tr>
<td>Develop on-line one-stop freight information shop with maps and regulation information</td>
<td>Improve loading zone enforcement</td>
<td>Utilize vacant lots as temporary truck parking</td>
<td>Encourage delivery companies to buy or lease parking in surface parking lots</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Encourage off-peak deliveries</td>
<td></td>
<td></td>
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<tr>
<td>Convene a freight committee at the city level</td>
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<tr>
<td>---------------------------------------------</td>
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</tr>
<tr>
<td>Conduct a regional freight plan / regional goods movement study</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Add loading zones in “hot spot” areas</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Create an Incident Alert System</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Publish and distribute “Transportation Guide” or “Truckers Guide”</td>
<td></td>
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</tr>
</tbody>
</table>
Appendix 5: Draft Survey Questions to Carriers and Receivers

Sample of Questions to Receivers

The Urban Transportation Center at the University of Illinois is partnering with the Supply Chain Innovation Network of Chicago (SINC), a freight business organization created by World Business Chicago, to establish an Off Peak Delivery program in Chicago. Off Peak Delivery (OPD) is the practice of shifting deliveries to the off hours - typically between 7pm and 6am - in order to ease congestion, reduce costs, increase reliability, and improve the environment for businesses and their patrons.

The following brief survey is designed to gather information and gauge the interest and suitability of potential participants in an OPD pilot project in Chicago.

All responses are confidential.

Thank you for your participation!

Please fill in the following information.

Name
Title
Company
Address
Postal Code
Phone number
Email address

Who schedules and manages deliveries for your company?

Name
Contact Information

What are your normal business hours?

How many deliveries do you typically receive each day?
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>When do your deliveries typically arrive? (Check all that apply.)</td>
<td>8am to 10am, 10am to 3pm, 3pm to 7pm, 7pm to 8am</td>
</tr>
<tr>
<td>How are deliveries to your facility typically made? (Check all that apply.)</td>
<td>Attached loading dock, Alley access, Back door or side door, Front door, Other, please explain below, I don't know</td>
</tr>
<tr>
<td>In a typical week, from how many sources do you receive deliveries?</td>
<td>One to four, five to nine, ten to nineteen, twenty or more</td>
</tr>
<tr>
<td>Do you receive deliveries from your organization's proprietary warehouses?</td>
<td>Yes, all or most of my deliveries come from proprietary warehouses, Yes, some of my deliveries come from proprietary warehouses, No, none of my deliveries come from proprietary warehouses</td>
</tr>
</tbody>
</table>
Please list the following information, if known, pertaining to the carriers that deliver the highest volume of goods to your facility.

<table>
<thead>
<tr>
<th>Carrier Name</th>
<th>Delivery Frequency</th>
<th>Time of Delivery</th>
<th>Size of Truck</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

How easy or difficult would it be to shift receipt of all or some of your deliveries to off peak hours (7pm to 6am)?

- Very Easy
- Easy
- Somewhat Easy
- Neutral
- Somewhat Difficult
- Difficult
- Very Difficult

If you answered "somewhat difficult", "difficult", or "very difficult" to the question above, please explain your primary concerns in accepting deliveries from 7pm to 6am.
How much of a discount on your freight delivery costs would prompt you to shift receipt of your deliveries to 7pm to 6am? (Check all that apply.)

- My deliveries already occur from 7pm to 6am
- I would not need a discount
- 10% discount
- 20% discount
- 30% discount or more
- No discount would prompt me to shift receipt of my deliveries from 7pm to 6am

Are there incentives other than discounted delivery costs that might prompt you to shift receipt of your deliveries to 7pm to 6am? (Check all that apply.)

- Public recognition
- Tax credit
- Cash incentive
- Other, please explain below.
- No

Would you be willing to accept deliveries from 7pm to 6am when your staff is not present to receive them? (Check all that apply.)

- Yes, I can accept unstaffed deliveries with no changes to facilities or policies.
- Yes, if the carrier agreed to a certain code of conduct.
- Yes, if certain physical changes were made to create a secure delivery area.
- Maybe, if the circumstances were right.
- No, I would not accept unstaffed deliveries.

Please explain your response to the previous question.

Would you be interested in participating in an Off Peak Delivery pilot project in which some or all of your deliveries were shifted to the hours between 7pm and 6am?

- Yes
- I may be interested and would like more information
- No
- Other, please explain below.
Do you know of a business or businesses that might want to participate in an Off Peak Delivery pilot project? If so, please include the company, contact name, phone number, and email address below. You can also feel free to forward them the link to this survey.

Do you have any comments you would like to share with us?
Sample of Questions to Carriers

The Urban Transportation Center at the University of Illinois is partnering with the Mid-West Truckers Association to explore the possibility of establishing an Off Peak Delivery Pilot Project in Chicago. Off Peak Delivery (OPD) is the practice of shifting deliveries to the off hours - typically between 7pm and 6am - in order to ease congestion, reduce costs, increase reliability, and improve the environment for businesses and their patrons.

The purpose of the brief survey that follows is to gather information and gauge the interest and suitability of potential participants in this pilot project.

All responses are confidential.

Thank you for your participation!

<table>
<thead>
<tr>
<th>Please fill in the following information.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Title</strong></td>
</tr>
<tr>
<td><strong>Company</strong></td>
</tr>
<tr>
<td><strong>Address 1</strong></td>
</tr>
<tr>
<td><strong>Address 2</strong></td>
</tr>
<tr>
<td><strong>City</strong></td>
</tr>
<tr>
<td><strong>State</strong></td>
</tr>
<tr>
<td><strong>Postal Code</strong></td>
</tr>
<tr>
<td><strong>Phone number</strong></td>
</tr>
<tr>
<td><strong>Email address</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To what locations within the Chicago region do you deliver? (Check all that apply.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Chicago Loop</td>
</tr>
<tr>
<td>☐ North Michigan Avenue/Streeterville area</td>
</tr>
<tr>
<td>☐ Other Chicago neighborhoods</td>
</tr>
<tr>
<td>☐ Chicago suburbs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>When do you typically make deliveries? (Check all that apply.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ 6am to 10am</td>
</tr>
<tr>
<td>☐ 10am to 3pm</td>
</tr>
<tr>
<td>☐ 3pm to 7pm</td>
</tr>
<tr>
<td>☐ 7pm to 8am</td>
</tr>
</tbody>
</table>

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Please answer the following questions regarding a typical delivery tour.

How many stops are made on a typical delivery tour?
How much service time is typically spent at each stop?

Where do your trucks typically park when making deliveries? (Check all that apply.)
- Loading docks
- In the alley
- On the street in a loading zone
- On the street, but not in a loading zone
- Other, please specify below

What types of truck do you use for deliveries in the Chicago area?

What would you estimate you spend on paying parking ticket costs for an average truck each month? $0 Per month

If the receiver was willing, how easy or difficult would it be to make deliveries during off peak hours (7pm to 6am)?
- Very Easy
- Easy
- Somewhat Easy
- Neutral
- Somewhat Difficult
- Difficult
- Very Difficult

If you answered "somewhat difficult", "difficult", or "very difficult" to the question above, please explain your primary concerns in making deliveries from 7pm to 6am.

In New York City, carriers reported that deliveries taking place between 7pm and 6am were 30-40% cheaper than daytime hour deliveries. Is this consistent with your experience in the Chicago area?
If tolls were lowered during off peak periods on area toll roads, would you shift some of your deliveries to off peak times to receive the lower rate? Please explain your answer.

- Yes. Please explain below.
- No. Please explain below.
- It depends. Please explain below.

How much of a discount would you be willing to give receivers who moved receipt of their deliveries to 7pm to 8am? (Check all that apply.)

- I would not give a discount
- 10% discount
- 20% discount
- 30% discount or more
- I currently make deliveries between 7pm and 8am and offer the following discount to those receivers (specify discount below).

Would you be interested in participating in an Off Peak Delivery pilot project in which some of your deliveries were made during off peak hours between 7pm and 8am?

- Yes
- I may be interested and would like more information
- No
- Other, please explain below.

Do you have any comments you would like to share with us?
Footnotes

vii Ibid.
xii Ibid.
xiv Ibid
xvi Jose Holguín-Veras, “The Off Hour Deliveries NYC Project,” 2011.
xvii Jose Holguín-Veras, “Urban Freight Transport: The Final Frontier (and our role as the pioneers),” *Rensselaer*, 2013.
xviii Jose Holguín-Veras, presentation to SINC Board, Chicago, December, 2013
xxi Jose Holguín-Veras, “The Off Hour Deliveries NYC Project,” August 17, 2011.
xxvii Ibid.

Ibid


Bibliography


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